

**I. AMENDMENTS**

**A. In the specification**

Please replace the paragraph beginning on page 18, line 29.

B1  
--[0068] Pineal cell preparation and treatment: Pinealocytes were prepared from rat pineal glands by trypsinization as previously described (10). The cells were suspended in Dulbecco's modified Eagle medium (DMEM) containing 10% fetal calf serum and maintained (37°C.) for 18 h in a gas mixture of 95% air and 5% CO<sub>2</sub>. During this 18 hour period, some cells were treated, as indicated in Table 3 experiment 2, in aliquots of 50,000 cells/300 µl and washed prior to addition of fresh medium and further treatment. In some cases, as in Table 3, experiment 1, cells were not aliquoted until after 18 hours of control incubation and in these cases, aliquots of cells (50,000 cells/300 µl) were prepared and treated with drugs. Drugs were prepared in 100.times.concentrated solutions in water or dimethyl sulfoxide. The duration of the drug treatment was 5 h.--

Please replace Table 3 found beginning at line 1 of page 30 with the following Table 3.

**TABLE 3.** Effect of *N*-bromoacetyltryptamine on melatonin production by norepinephrine-treated pinealocytes and effects on stimulation of AANAT activity. Cells were prepared and treated as described herein. Experiment 1 shows that 0.1 or 1.0  $\mu\text{M}$  *N*-bromoacetyltryptamine treatment inhibits melatonin production during a 5 hour test period. Experiment 2 shows that, after an 18 hour treatment period with 0.5  $\mu\text{M}$  *N*-bromoacetyltryptamine(BAT) and subsequent wash out to remove the drug, pinealocytes are still able to respond to norepinephrine (NE) with an increase in AANAT activity, indicating that they have not been killed by prior treatment.

Experiment 1.

Treatment of pinealocytes in culture (18-24 hours)	Melatonin production (pmol/100,000 cells, 18-24 hours)
Control	Not detectable
Norepinephrine (10 $\mu\text{M}$ )	12.43 $\pm$ 2.00
<i>N</i> -Bromoacetyltryptamine (1 $\mu\text{M}$ )	0.65 $\pm$ 0.05
Norepinephrine (10 $\mu\text{M}$ ) + <i>N</i> -Bromoacetyltryptamine (1 $\mu\text{M}$ )	0.95 $\pm$ 0.25
Norepinephrine (10 $\mu\text{M}$ ) + <i>N</i> -Bromoacetyltryptamine (0.1 $\mu\text{M}$ )	4.55 $\pm$ 0.04

Experiment 2.

Treatment I (0-18 hr)	Treatment II (18-23 hr)	Melatonin (18-23 hr) (pmole/ $10^5$ cells)	AANAT (23 hr) ( $\mu\text{mol/h}/10^5$ cells)
DMSO	Control	1.12 $\pm$ 0.31	ND
DMSO	NE 10 $\mu\text{M}$	10.44 $\pm$ 1.07	0.89 $\pm$ 0.10
DMSO	NE 10 $\mu\text{M}$ + BAT (0.5 $\mu\text{M}$ )	1.88 $\pm$ 0.82	0.48 $\pm$ 0.05
BAT (0.5 $\mu\text{M}$ )	Control	1.78 $\pm$ 0.14	ND
BAT (0.5 $\mu\text{M}$ )	NE (10 $\mu\text{M}$ )	12.22 $\pm$ 2.90	0.86 $\pm$ 0.06